

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for inserting an image into a document stored in memory of a computer, comprising the steps of:

(a) making an image source device active with an application program used to create a text content of said document, wherein the image source device is in communication with the computer and the computer is executing the application program;

(b) using a special application programming interface (API) module accessed from within the application program, for interfacing the application program with a TWAIN module that is used for acquiring an image with the image source device that is active, the special API module being entirely separate and distinct from the TWAIN module and providing a user interface that is presented to a user within and under control of the application program, said API module isolating a user from directly interacting with the TWAIN module and thereby simplifying the step of acquiring the image;

(c) causing the application program to employ the special API module for negotiating with the image source device that is active to determine a set of image capture parameters that control said image source device when acquiring the image; and

(d) communicating data representing said image from the image source device into the memory of the computer so that the data representing said image comprises a portion of the document stored in the memory of the computer, all without saving said data to any permanent file prior to communicating the data into the document stored within the memory of the computer.

2. (Original) The method of claim 1, further comprising the steps of:

(a) creating a list of all image source devices in communication with the computer; and

(b) enabling a user to select the image source device that is active from the list.

3. (Original) The method of claim 1, wherein the active image source device comprises one of a scanner and a digital camera.

4. (Original) The method of claim 1, wherein the step of acquiring the image comprises the step of scanning a graphic source that has defined edges, further comprising the steps of automatically detecting the edges of the graphic source, and cropping the image at the edges of the graphic source to exclude any portion of a scanned field beyond the edges of the graphic source from the image represented by the data inserted into the document.

5. (Original) The method of claim 1, further comprising the step of converting the data representing the image into a compressed format prior to inserting the data into the document.

6. (Previously Presented) The method of claim 1, further including the steps of:

(a) selecting at least one image enhancement criterion from within the application program; and

(b) enhancing said captured image based on said image enhancement criterion, prior to inserting said data representing the image into said document.

7. (Original) The method of claim 6, wherein the image enhancement criterion is a contrast level of the image that is adjusted to enhance a brightness of the image within the document.

8. (Original) The method of claim 6, wherein the image enhancement criterion is a color level of the image that is adjusted to enhance a color relationship of the image inserted within the document, based on a gamma correction algorithm.

9. (Previously Cancelled)

10. (Previously Presented) The method of claim 1, further comprising the step of determining a set of capabilities of the image source device that is active, wherein the set of image capture parameters are negotiated based in part on the capabilities of said image source device.

11. (Original) The method of claim 10, wherein a set of capabilities are associated with the image source devices connected with the computer and are stored in an operating system registry.

12. (Previously Presented) The method of claim 1, further comprising the step of using the special API module for determining from within the application program whether the image source device that is active is able to perform an automatic image scan, wherein the automatic image scan comprises the steps of capturing an image of a graphic source with said image source device and inserting the data representing the image into the document, all without requiring a user to select image capture parameters.

13. (Previously Presented) The method of claim 12, wherein the image source device that is active has an X resolution and a Y resolution and includes a driver that provides a user interface for selecting image capture parameters, the step of determining if said image source device can perform the automatic image scan comprising the steps of:

- (a) confirming that said image source device can control its X resolution;
- (b) confirming that said image source device can control its Y resolution; and
- (c) confirming that the user interface of said image source device can be bypassed, wherein an affirmative answer to all of the steps of confirming indicates that said image source device can perform the automatic image scan.

14. (Original) The method of claim 12, wherein the step of determining if said image source device can perform the automatic image scan comprises the steps of:

- (a) setting an error flag;
- (b) attempting to perform an automatic image scan;
- (c) clearing the error flag if the automatic image scan is successful; and

(d) evaluating the error flag during a subsequent use of the image source device, whereby if the error flag has not been cleared, the image source device cannot perform an automatic Image scan.

15. (Original) The method of claim 12, wherein if it is determined that said image source device can perform an automatic image scan, enabling a user of the application program to selectively cause the image to be acquired and the data representing the image to be inserted into the document, all with a single user control selection.

16. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 1.

17. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 12.

18. (Previously Presented) A method for inserting a plurality of images into a document stored in a memory of a computer, comprising the steps of:

(a) enabling an image source device user interface provided by a special application programming interface module from within an application program used to create a text content of the document, wherein the application program is running on the computer that is in communication with an image source device, said image source device acquiring multiple images and storing image source data representing the multiple images, wherein the special API module is entirely separate and distinct from a TWAIN module and interacts with the TWAIN module to control the image source device, and wherein the image source device user interface provides a selection scheme that is independent of the TWAIN module within the application program for selecting a plurality of the images stored in the image source device for insertion into the document;

(b) enabling a user to use the selection scheme of the image source device user interface from within the application program to select the plurality of images to be inserted into the document;

(c) transferring data representing the images selected from the image source device, to the memory of the computer;

(d) converting said data representing the selected image into a compressed format; and

(e) inserting said image data in the compressed format into the document stored in the memory of a computer so that the document includes the plurality of images without saving said image data in the compressed format to any permanent file prior to inserting the image data in the compressed format into the document stored in the memory of the computer.

19. (Original) The method of claim 18, wherein the application program is a word processing application, and the plurality of images are inserted into the document as a plurality of tiled images.

20. (Original) The method of claim 18, wherein the application program is a spreadsheet application that produces a spreadsheet document, and the plurality of inserted images are inserted into the spreadsheet document as a plurality of cascaded images.

21. (Original) The method of claim 18, wherein the application program is a presentation design application, and the plurality of inserted images are inserted into a presentation document as a plurality of individual slides.

22. (Previously Presented) The method of claim 18, further including the step of performing a postprocessing modification to said data from within the application program to enhance a quality of the plurality of images.

23. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 18.

24. (Previously Presented) A system for inserting an image into a document, comprising:
- (a) a computer having a memory and a processor, the memory storing:
 - (i) machine instructions that are executable on the processor;
 - (ii) the document;
 - (b) an application program comprising the machine instructions that are stored in the memory, a text content of said document being editable using the application program;
 - (c) an image acquisition device connected in communication with the computer, to provide image data representing an image to the computer;
 - (d) a source driver module comprising computer-executable instructions stored in the memory and in communication with the image acquisition device so as to control acquisition of an image by the image acquisition device for transfer as the image data, into the memory of the computer;
 - (e) a source manager module comprising computer-executable instructions stored in the memory and in communication with the source driver module, the source manager module providing commands to the source driver module to acquire an image using the image acquisition device, such that the application program negotiates with the image acquisition device that is active to determine a set of image capture parameters that control said image source device when acquiring the image; and
 - (f) an interface module comprising a special application programming interface (API) module defined by computer-executable instructions stored in the memory, the special API module being entirely separate and distinct from the source manager module and serving as an interface with the source manager module and under control of the application program, isolating a user from the source manager module and thereby simplifying acquisition of images for insertion into the document, the interface module providing commands to the source manager module to acquire an image using the image acquisition device, the interface module inserting the image data representing the image into the document that is stored in the memory of a computer without saving said image data to any permanent file prior to inserting the image data into the document stored in the memory of the computer.

25. (Original) The system of claim 24, wherein the application program is a word processing application.

26. (Original) The system of claim 24, wherein the application program is a spreadsheet application.

27. (Original) The system of claim 24, wherein the application program is a presentation design application.

28. (Original) The system of claim 24, wherein the source manager module complies with the TWAIN communication specification.

29. (Original) The system of claim 24, wherein the application program is able to request the interface module to acquire an image by issuing a single procedure call to the interface module.

30. (Original) The system of claim 24, wherein the application program provides a user interface that enables a user to acquire an image from the image acquisition device and insert the data representing the image into the application program document by selecting a single application menu option and performing a single subsequent user action.

31. (Previously Presented) The system of claim 24, wherein the interface module comprises additional computer-executable instructions for enhancing the quality of the captured image from within the application program, the captured image quality being enhanced prior to inserting the data representing the image into the application program document.

32. (Original) The system of claim 24, wherein the image is acquired by scanning a graphic source that has edges, and the interface module comprises additional computer-executable instructions for detecting the edges of the graphic source so as to automatically crop a scanned field to include only the portion of the scanned field included within the graphic source

in the image, the image being so cropped prior to the data representing the image being inserted into the document.

33. (Original) The system of claim 24, wherein the interface module comprises additional computer-executable instructions for converting the data representing the image into a compressed format, said data being converted into the compressed format prior to being inserted into the document.